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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
10/709,255	04/23/2004	Jin-Ho Kim	2025-13	3254								
52706 IPLA P.A. 3580 WILSHIRE BLVD. 17TH FLOOR LOS ANGELES, CA 90010	7590 12/28/2007		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">SHAIFER HARRIMAN, DANT B</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2134</td><td></td></tr></table>		EXAMINER		SHAIFER HARRIMAN, DANT B		ART UNIT	PAPER NUMBER	2134	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/709,255

Applicant(s)

KIM ET AL.

Examiner

Dant B. Shaifer - Harriman

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3, 4 & 6 - 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Response to Amendment**

1. The text of those sections of Title 35, U.S.Code not included in this section can be found in the prior office action.
2. The prior office actions are incorporated herein by reference.
3. Claims 2, 5 have been cancelled.
4. Claims 1, 3, 4, 6, 7, 8, 9, 10 have been amended.
5. Claims 1, 3, 4, 6, 7, 8, 9, 10 are pending in the application.
6. Examiner withdraws the claim objections of c1 – c10, due to the correction of by the applicant.

**Response to Arguments**

7. Applicant's arguments filed 11/02/2007 have been fully considered but they are not persuasive.

**Applicant states:** *"In addition to the lack of m.SYN cookie, the modified SYN cookie, Cheng does not teach or suggest another feature of the present invention."*

- The examiner respectfully disagrees, applicants logic and reasoning is moot in view of new grounds of rejection. Please see the new rejection below.

**Applicant states:** *"For an instance, since Fontes does not suggest or teach the time counter of the firewalls and cannot help but using regular current date and time data, the hash value in Fontes's disclosure must be different in the structure and function. Fontes's blended SYN cookie is distinctly different from the m.SYN cookie of the present invention."*

- The examiner respectfully disagrees, the reference Fontes states in Col. 5, lines 32 – 45, the examiner notes that that examiner interprets "time counter," merely as a time counting apparatus, that is able to count time values, furthermore the examiner notes that the reference teaches a time value.

**Applicant states:** *"In contrast, in the present invention, the SYN packet sequence number of the SYN packet produced by the client in the first stage of the process is replaced with the m.SYN cookie. Also, a part of the SYN packet sequence number produced by the client is used to create the m.SYN cookie to support an incarnation of TCP connection, which is not suggested or taught by Fontes."*

- In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the SYN packet produced by the client in the first stage of the process.....",) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Applicant states:** " *Fontes does not disclose the features of the present invention that the m.SYN cookie is used to communicate the information between the firewalls and share the status of the TCP connections across the firewalls.*"

- The examiner respectfully disagrees, the reference Fontes states in Col. 5, lines 46 – 58, the examiner notes that the blended SYN cookies are used to authenticate the client that is on the other side of the firewall in the external network, once the client has been authenticated, then normal TCP connections can be used to facilitate information exchange between the client device and the server.

**New Rejection:**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being taught by Jin-Ho Kim and Saewoong Bahk, “ A connection Management

Protocol for Stateful Inspection Firewalls in Multi- Homed Networks," published 4/2003.

Kim teaches:

Claim 1. A method of sharing a state between stateful firewalls on a n-multiple entry/exit point (MEP) network for data exchange between a server and a client through firewalls physically remote from each other, comprising the steps of:

(a) one of the firewalls receiving an SYN packet sent from the client to the server, wherein the firewalls share a synchronized time counter, which is increased at regular intervals, and a same secret key, wherein the SYN packet comprises an Initial Sequence Number (ISN) (Page 264, section 3: "Modified SYN Cookie," the examiner notes that the reference teaches a time counter and secret key, and firewalls);

(b) the firewall creating a modified SYN cookie (hereinafter referred to as an m.SYN cookie), modifying the SYN packet using the m.SYN cookie and sending the SYN packet to the server, and the server sending a SYN/ACK packet to the client in response to the SYN packet wherein the m.SYN cookie comprises upper bits of the ISN of the SYN packet, bits of time indicated by the time counter of the firewall, which creates the m.SYN cookie, at a time of creation of the m.SYN cookie, bits of an output value of a hash function, and at least some bits of the time indicated by the time counter of the firewall, wherein the hash function comprises variables for a secret key, a source address, a source port number, a destination address, a destination port number, at least some partial bits of the ISN, a time indicated by the time counter of the firewall, which creates the m.SYN cookie, at the time of creation of the m.SYN cookie (Page 263 & Page 264, section 2 &

3: " Support of Reincarnation of a TCP Connection" & "Modified SYN Cookie," the examiner notes that the reference teaches a time counter, upper bits of a ISN, firewall time counter, hash function);

(c) the firewall, which has received tile SYN/ACK packet, extracting a firewall identifier IDa,. from the SYN/ACK packet and sending the SYN/ACK packet to a corresponding one of the firewalls, the corresponding firewall searching a state table for connection information and sending the connection information, together with the SYN/ACK packet, to the firewall, which has received the SYN/ACK packet (Page 262, section 1: "Protocol Design," the examiner notes that the modified cookies uses a firewall ID); and

(d) the firewall, which has re-received the SYN/ACK packet, updating the state table, changing an acknowledgement number of the SYN/ACK packet to an Initial Sequence Number (ISN<sub>c</sub>)+1, and sending the SYN/ACK packet to the client (Page 262, section 1: "Protocol Design," the examiner notes that steps #9 & #10 of the protocol states that the ISN (initial sequence number) be incremented by one and sent to the client, also please see figure #4, entitled "connection state exchange protocol" ).

**Previous Office action dated 7/30/2007:**

***Claim Rejections - 35 USC § 103***

Claims 3, 4, 6, 7, 8, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (US Patent # 7107609 B2) in view of Fontes et al. (US Patent # 7058718 B2).

- Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dant B. Shaifer - Harriman whose telephone number is 571-272-7910. The examiner can normally be reached on Monday - Thursday: 8:00am - 5:30pm Alt.Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.S.H

12/ 20/2007

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12,21,07